

SUMMARY

Hepatocellular carcinoma (HCC) is a major type of primary liver cancer and one of the most frequent human malignant neoplasms. It is estimated to cause more than a quarter of a million deaths each year throughout the world.

The aim of the present work was to assess the value of serum level of TGF-beta1 in patients with HCV related CLD and its level in patients with HCC and to evaluate its sensitivity and specificity in comparison to AFP in early diagnosis of HCC.

The study was performed on two groups of Egyptian patients, from the Tropical Medicine Department and outpatient's clinic for early detection of hepatocellular carcinoma (HCC), Ain Shams University Hospitals; **Group I** consisted of forty patients with chronic liver disease, their ages ranged between 85 and 35 years (mean 51.8 ± 9.2 years) included 23 male patients (57.5%) and 17 female patients (42.5%), **Group II** consisted of forty patients with HCC, their age ranged between 72 and 42 years (mean 54.0 ± 7.5 years) included 30 male patients (75%) and 10 female patients (25%).

Patients in both groups were subjected to full history taking, thorough clinical examination and laboratory

investigations including the two tumor markers for HCC (alpha-fetoprotein and Transforming Growth Factor Beta 1) together with abdominal ultrasonography (US) and triphasic spiral computed tomography (CT).

The commonest presentation among our studied patients with HCC was the triad of a newly developed persistent right hypochondrial abdominal pain (60%), loss of weight (32%) and anorexia (47%). While the significant signs of liver cell failure that were detected on general examination of those patients were the Jaundice (27.5%), and concerning the abdominal examination, splenomegaly was the most significant finding in those patients (70%).

Regards the liver function evaluation, our laboratory results revealed that the serum aspartate aminotransferase (AST) (mean 100.5 ± 60.4 IU/L) and alkaline phosphatase (ALP) (mean 323.5 ± 166.4 IU/L) levels were significantly elevated in patients with HCC. Also, erythrocyte sedimentation rate were significantly elevated in HCC patients.

The main goal of our study was to evaluate the role of Transforming Growth Factor Beta 1 in diagnosis of HCC and compare it with alpha-fetoprotein (AFP) that is most widely used tumor marker for diagnosis as well as surveillance of HCC.

our study revealed that the TGF beta 1 is less accurate than AFP in differentiating patients with HCC . Also it was not correlated with ALT levels and AFP levels.

Therefore, TGF β 1 could not a candidate for noval tumor marker in detecting HCCs earlier because it shows less sensitivity than AFP.